REMARKS/ARGUMENTS

Claims 1-13, 15-23, 25-37,39-42, 44-48, 51, 53, 57-63, 85, 86 and 97-121 are pending. By this Amendment, claims 1, 48, 51, 57, and 61 are amended, claims 49, 50, 52, 55 and 56 are canceled, and new claims 115-121 are added. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

At the outset, Applicants appreciate the courtesies extended by Examiner Pham to Applicants' representatives during a personal interview conducted on July 15, 2005.

Claim 86 was rejected under 35 U.S.C. § 102(b) over Satake et al. (U.S. Patent No. 6,097,493). This rejection is respectfully traversed.

Claim 86 is directed to a method for inspecting a predetermined characteristic of a pellet-shaped article. The method includes conveying at least one row of articles along a transport path, comparing the predetermined characteristic against a given standard, actively accepting selected ones of the articles which are acceptable by forcing them away from the transport path, and passively allowing rejected ones of the articles to be removed from the transport path.

Satake et al. does not teach or suggest this subject matter. Satake et al. teaches a device for evaluating the quality (i.e., length or color) of granular objects (i.e., rice). Satake et al. discloses a feeding section in the form of a rotating disk 16 which supports and transports a plurality of grains of rice. Each grain of rice is evaluated in terms of its color and/or length by using upper and lower sets of fluorescent light bulbs that direct light through each grain and a bottom plate 17 made of a transparent material. Satake et al. discloses a light emitter and receiving arrangement 4, 12 that directs light through each grain. The disclosure of Satake et al. is focused on the use of light shielding members 8, 9, 11 which prevent light from directly passing from one fluorescent bulb or light emitter (e.g., 4) to a light receiver (e.g., 12).

Based on the quality evaluation, a sorting signal of the granular object is output to the sorting section 19 through an input/output port 20a. Based on this signal, the sorting section performs predetermined steps. The actual performance in the sorting section is such that, for the performance to be delayed for a predetermined time from the generation of the sorting signal, a delay circuit may be provided in a control section 20 or in the sorting section 19. Thus, time delay caused by the locations of the light receiving sections 4, 12 and the sorting section 19 may be compensated. See column 7, lines 5-15.

As such, Satake et al. does not teach or suggest the method of claim 86. For example, Satake et al. does not teach actively accepting selected ones of the articles which are acceptable by forcing them away from the transport path or passively allowing rejected ones of the articles to be removed from the transport path, as recited in claim 86. Paragraph 118 of the original specification describes advantages to this method. In addition, as discussed during the interview, such a method helps to increase the ability to individually treat each of the articles depending on whether the predetermined characteristic is sensed. Satake et al. does not explicitly disclose the details of whether sorting section 19 accepts or rejects acceptable articles, or whether it accepts or rejects rejected ones of the articles.

During the interview, the Examiner took the position that Satake et al. must work in either one of two ways: 1) the claimed fashion (actively accepting/passively rejecting); or 2) by actively rejecting/passively accepting. However, the possibility that the device of Satake et al. may work in the claimed manner is not sufficient to support a rejection under 35 U.S.C. §102(b). Where the prior art is silent as to an asserted claim feature the claim can be rejected if the prior art inherently works in the claimed manner. For a §102(b) rejection, "inherency" cannot be established by possibilities or probabilities. The mere fact that a certain thing may result from a

given set of circumstances is not sufficient. See, e.g., Continental Can Co. USA v. Monsanto Co., 948 F 2d 1264, 1268-69, 20 USPQ 1746, 1749 (Fed. Cir. 1991). Therefore, the rejection under 35 U.S.C. §102(b) is in error, at least because the Examiner recognizes that Satake et al. may operate to actively reject/passively allow articles.

As an aside, it is noted that Satake et al. seems to describe a system whereby defective pellets are sorted. See column 1, lines 46-48 ("... when a defective pellet having a colored portion is to be sorted from among transparent or translucent pellets, ..."). This is the opposite of what is claimed.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1-13, 15-23, 25-37, 39-42, 44-53, 55-63, 85, 97-103, 105-110, and 112-114 are rejected under 35 U.S.C. § 103(a) over Boyce (U.S. Patent No. 5,979,309) in view of Satake et al. and Ainsworth et al. (U.S. Patent No. 5,703,377). This rejection is respectfully traversed.

Boyce teaches the use of a pellet marking machine for inverting a multiplicity of pellets. Inverting of the articles is achieved using rails as shown in the sequential steps of Figures 5-9. Accordingly, both sides of an article can be printed with printing indicia or other intelligence. In paragraph 8, lines 7-11, Boyce discloses that the pellet inverting device can be used for sequentially exposing different surface areas of a pellet for printing or inspection for pellets having more than two sides.

In the Office Action, it is stated that Boyce does not teach the details of an inspection device. To make up for this deficiency, the Office Action relies on the teachings of Satake et al., and further states that Satake et al. teaches that pellets G are transported on a conveyer mechanism having at least one throughhole.

Applicants respectfully traverse this assertion. As discussed above, Figure 5 of Satake et al. shows a rotating disk 17 having a transparent backing plate 17 on which each of the granular objects rests. Therefore, Figure 5 of Satake et al. does not teach or suggest a throughhole.

Moreover, in regard to claim 1, neither Boyce nor Satake et al. teaches or suggests an apparatus for printing and inspecting pellet-shaped articles which includes, *inter alia*, a removal mechanism ... structured to individually remove at each of the plurality of pellet-shaped articles from at least a selected one of said rows of the conveyer mechanism depending on whether the printing indicia on each article is sensed by the first camera unit. Claim 1 defines that each of the rows is configured to receive multiple ones of said pellet-shaped articles, each said row being oriented substantially transverse to the transport direction. While Boyce suggests that its inversion rails can be used for purposes of printing or inspection of pellets having more than two sides (see column 8, lines 7-11), Boyce is silent as to teachings of a removal mechanism.

Satake et al. teaches the use of a sorting section 19, but Satake et al. discloses the use of a disk conveyer which conveys only a single line of granular objects along a curved transport direction. Satake et al. does not teach or suggest a removal mechanism structured to individually remove each of the plurality of pellet-shaped articles from at least a selected one of said rows of the conveyer mechanism, depending on whether the printing indicia on each article is sensed by the first camera unit.

In regard to independent claim 17, Figure 5 of Satake et al. does not teach or suggest that a conveyer mechanism has at least one throughhole configured to allow the first camera unit to sense the first side of the pellet-shaped article that is visible through the throughhole. Satake et al. does not teach a conveyer mechanism having a throughhole since Satake et al.'s disk 16 includes a transparent backing layer 17 which does not have a throughhole.

With respect to independent claim 32, neither Boyce nor Satake et al. teaches or suggests a conveyer apparatus comprising, *inter alia*, a conveyer mechanism including a plurality of carrier bars, each carrier bar being structured to simultaneously convey a plurality of pellet-shaped articles along a predetermined path, and a first camera unit positioned adjacent a first side of the conveyer mechanism and configured to simultaneously sense a first predetermined characteristic of the plurality of pellet-shaped articles. Nothing in Satake et al. indicates that the granular objects are simultaneously sensed. Instead, one of ordinary skill in the art would understand Satake et al. as inspecting each granular object individually rather than a plurality of granular objects simultaneously, as recited in claim 32.

In addition, neither Boyce nor Satake et al. teaches or suggests a removal mechanism structured to individually remove at least a selected one of the plurality of pellet-shaped articles from at least a selected one of the plurality of carrier bars.

With respect to independent claim 48, neither Boyce nor Satake et al. teaches or suggests a pellet-shaped article inspection unit comprising, *inter alia*, using a single detector, first and second camera units, a removal mechanism, and a controller, in which the first camera unit is positioned transverse to the carrier bars on an upper side of the conveyer mechanism to sense a first side of the pellet-shaped article and the second camera unit is positioned transverse to the carrier bars on an inner side of the conveyer mechanism to sense a second side of the pellet-shaped article through a throughhole of each of the carrier bars.

In addition, neither Boyce nor Satake et al. teaches or suggests that each said throughhole is structured to be smaller than the pellet-shaped article (new claim 115), or that each carrier bar includes a plurality of recessed pockets configured to receive the pellet-shaped articles, each said pocket being larger than a diameter of the said throughhole (new claim 116).

With regard to independent claim 62, neither Boyce nor Satake et al. teaches or suggests a method of inspecting pellet-shaped articles comprising, *inter alia*, using a single detector, simultaneously sensing at least one side of a group of the plurality of pellet-shaped articles provided on a selected one of the carrier bars for a predetermined characteristic, or individually removing at least a selected one of the plurality of pellet-shaped articles from the selected one of said carrier bars depending on whether the predetermined characteristic is sensed. Boyce only suggests the idea of inspection of its pellet-shaped articles, but does not disclose how that is accomplished. Satake et al. teaches the use of a sensing arrangement which appears to sense granular objects one at a time and sorting based on whether a predetermined characteristic is sensed. Satake et al. does not teach simultaneous sensing of a carrier bar having a plurality of articles, or individually removing one of those articles from a selected one of the carrier bars depending on whether the predetermined characteristic is sensed, per claim 62. Neither Boyce nor Satake et al. teaches or suggests the subject matter of new claims 120 and 121 (related to laser drilling).

With respect to independent claim 85, neither Boyce nor Satake et al. discloses a reject system to forcibly eject from the conveyer selected ones of the articles which are acceptable, and to passively allow rejected ones of the articles to be removed from the conveyer. See the arguments raised above in relation to claim 86.

With respect to claims 97, 103 and 109, neither Boyce nor Satake et al. teaches or suggests a carrier bar for a conveyer mechanism, or a carrier bar assembly, which includes a plurality of pockets and a throughhole. With regard to claim 97 (amended herein for clarity only), neither Boyce nor Satake et al. teaches or suggests that the throughholes configured to allow: 1) at least one camera unit to view the pellet-shaped article and 2) the removal

mechanism to remove the pellet-shaped article from that pocket in the carrier bar. Thus, it appears that claim 97 should have been indicated to be allowable as claims 104 and 111 were indicated to be allowable. Applicants appreciate this indication of allowable subject matter. To clarify the scope of coverage of claims 97, 103 and 109, new claims 117-119 have been added which specify that the throughholes configured to guide a burst of pressurized air to forcibly eject the pellet-shaped article from the pocket.

The dependent claims are patentable by virtue of their dependency on selected ones of the independent claims discussed above, in addition to the features they recite. For example, claim 15 specifies that the removal mechanism is a blower. Moreover, claim 15 is amended herein for clarity only to specify that the blower is positioned on a second side of the conveyer mechanism, opposite the first side. Claim 16 specifies that the blower includes a plurality of blower nozzles that is equal to a number of said pockets in each said row. The Office Action takes the position on page 5 that it would have been obvious to one of ordinary skill in the art to have replaced the pellet sorting section 19 of Satake et al. by a blower for the purpose of removing the pellet from the conveyer. Applicants respectfully request the Examiner to produce a reference which teaches why this substitution would have been obvious.

In addition, claim 61 recites that the blower includes a plurality of blower nozzles that is equal to a number of pockets in each carrier bar, each said blower being in communication with a respective one of the through holes. Satake et al. only teaches the use of a single sorting section 19.

In view of the above amendments and remarks, Applicants respectfully submit that all the claims are patentable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, he is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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